

REMARKS

Amendments

Amendments to the Claims

Applicant has amended the claims to more particularly point out what Applicant regards as the invention. Specifically, Applicant claims executing a first set of tasks on a macroblock by a main processor substantially concurrently with a co-processor executing a second set of tasks on a macroblock previously processed by the main processor. No new matter has been added as a result of these amendments because they are supported, *intra alia*, in paragraph 0019 and Figure 5 of the Specification.

Rejections

Rejections under 35 U.S.C. § 102(b)

Claims 1-2, 7-8, 10, 12-13, 18-19, 21, 23, 28-30, 32 and 37-39

Claims 1-2, 7-8, 10, 12-13, 18-19, 21, 23, 28-30, 32 and 37-39 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Lam et al., EP 0 782 341 A2 (previously cited).

Lam discloses creating two independent streams of compressed video using two different video compressors from the same input video stream. Lam's two video compressors operate on the operate on the same pixel block simultaneously.

In contrast, in amended independent claims 1, 12, 28, and 37, Applicant claim a main processor and a co-processor executing different encoding operations on different macroblocks in a video stream. While the main processor is executing a first set of encoding tasks on one macroblock, the co-processor is executing a second set of encoding tasks on a macroblock previously processed by the main processor. Because Lam does not disclose using one processor to process a macroblock while the other processor is doing different processing on a different macroblock, Lam cannot be properly interpreted as disclosing Applicant's invention as claimed.

Accordingly, Applicant respectfully submits that claims 1-2, 7-8, 10, 12-13, 18-19, 21, 23, 28-30, 32 and 37-39 are not anticipated by Lam and respectfully requests the withdrawal of the rejections under 35 U.S.C. § 102(b) over Lam.

Rejections under 35 U.S.C. § 103

Claims 3-4, 6, 9, 14-15, 20, 24-25 and 33-34

Claims 3-4, 6, 9, 14-15, 20, 24-25 and 33-34 stand rejected under 35 U.S.C. § 103(a) as being obvious over Lam in view of Krishnamurthy, U.S. Patent No. 6,497,607 (previously cited). Claims 3-4, 6, 9, 14-15, 20, 24-25 and 33-34 depend from one of independent claims 1, 12, 28 and 37.

Krishnamurthy discloses processing video frames by classifying frame regions as important regions or regions of interests. The important regions receive more and/or different video processing than non-important regions.

The combination of Lam and Krishnamurthy is improper because modifying Lam to incorporate Krishnamurthy's video stream encoding would render Lam unable to select between a variable length encoded stream or a fixed length encoded stream of the same video (Lam: page 2, lines 51-52 and Figure 1). Krishnamurthy encodes different portions of the video frames into two different variable length encoded streams (Krishnamurthy: col. 4, lines 57-59). Thus, incorporating Krishnamurthy's encoding would cause Lam to produce three encoded streams: one fixed length stream corresponding to the original video, and two different variable length encoded streams, each of which corresponds to only part of the original video. Because Lam is intended to select between either a fixed or a variable length encoded stream, each of which corresponds to the entire original video, modifying Lam to output two different variable length encoding streams, neither of which corresponds to the entire original video, would render Lam's invention unsatisfactory for its intended purpose. Therefore, the combination of Lam and Krishnamurthy is improper.

Moreover, the combination does not teach or suggest all the limitations of Applicant's invention as claimed in claims 3-4, 6, 9, 14-15, 20, 24-25 and 33-34. Lam does not disclose the claim element of encoding a video stream using a main processor and a co-processor in a parallel macroblock loop as claimed. Krishnamurthy is directed

towards classifying video frames and contains no disclosure directed toward a parallel macroblock as claimed. Therefore, the combination fails to disclose encoding a video stream using a main processor and a co-processor in a parallel macroblock loop as claimed.

Because the combination of Lam and Krishnamurthy is improper and furthermore does not teach or suggest all the limitations of claims 3-4, 6, 9, 14-15, 20, 24-25 and 33-34, Applicant respectfully requests the withdrawal of the rejection of claims under 35 U.S.C. § 103(a) over the combination.

Claims 5, 16, 26 and 35

Claims 5, 16, 26 and 35 stand rejected under 35 U.S.C. § 103(a) as being obvious over Lam, Krishnamurthy and Lee, U.S. Patent No. 6,317,460 (previously cited). Claims 5, 16, 26 and 35 depend from independent claims 1, 12, 28 and 37, respectively.

Because the combination of Lam and Krishnamurthy is improper, the further combination of Lam, Krishnamurthy and Lee is also improper.

Moreover, Lee is directed toward interpolating motion vectors used in video compression and does not teach or suggest encoding a video stream using a main processor and a co-processor in a parallel macroblock loop as claimed. Because neither Lam nor Krishnamurthy disclose this claim limitation, the further combination of Lam, Krishnamurthy and Lee cannot be properly interpreted as doing so.

Because the combination of Lam, Krishnamurthy and Lee is improper and furthermore does not teach or suggest all limitations of claims 5, 16, 26 and 35, Applicant respectfully requests the withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) over the combination.

Claims 17, 27, and 36

Claims 17, 27 and 36 stand rejected under 35 U.S.C. § 103(a) as being obvious over Lam, Krishnamurthy and Chu, U.S. Patent No. 5,367,629 (previously cited). Claims 17, 27, and 36 depend from one of independent claims 12, 28, and 37.

Because the combination of Lam and Krishnamurthy is improper, the further combination of Lam, Krishnamurthy and Chu is also improper.

Moreover, Chu discloses a system that serially compresses video using a pre-processing section, an encoder, and a post-processing section. Because Chu is directed toward serial processing, Chu cannot be properly interpreted as teaching or suggesting encoding a video stream using a parallel macroblock loop as claimed. Because neither Lam nor Krishnamurthy disclose this claim limitation, the further combination of Lam, Krishnamurthy and Chu cannot be properly interpreted as doing so.

Because the combination of Lam, Krishnamurthy and Lee is improper and furthermore does not teach or suggest all limitations of claims 17, 27, and 36, Applicant respectfully requests the withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) over the combination.

SUMMARY

Claims 1-10, 12-21, 23-30, and 32-39 are currently pending. In view of the foregoing amendments and remarks, Applicant respectfully submits that the pending claims are in condition for allowance. Applicant respectfully requests reconsideration of the application and allowance of the pending claims.

If the Examiner determines the prompt allowance of these claims could be facilitated by a telephone conference, the Examiner is invited to contact Sue Holloway at (408) 720-8300.

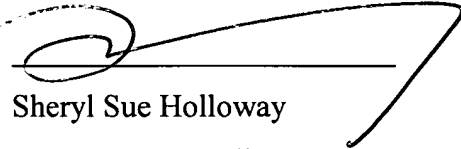
Deposit Account Authorization

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such extension.

Respectfully submitted,

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